SUPPORT FOR THE AMENDMENTS

This Amendment cancels Claims 43-59; and adds new Claims 60-79. Support for the amendments is found in the specification and claims as originally filed. In particular, support for "ethylenical hydroxyl group" is found in the specification at least at [0019]. It is believed that no new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 60-79 will be pending in this application. Claims 60, 62, 78 and 79 are independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

The present invention provides a material for purification of a semiconductor polishing slurry.

> It is desirable that the hydroxyl group fixed onto at least the surface of a **fibrous substrate** of the material for purification of a semiconductor polishing slurry according to the present invention is an **ethylenical hydroxyl group**, and it is desirable that **40 mg KOH/g or more** of it in terms of a hydroxyl value is fixed onto the surface of the fibrous substrate. Specification at [0019] (emphasis added).

Claims 43-59 are rejected under 35 U.S.C. §103(a) over EP 1179627 ("Nambu"). Nambu discloses a fiber capable of forming a metal chelate.

> The subject matter of the present invention is that at least one metal chelate-forming compound ... is bonded to a fiber molecule of a natural fiber or regenerated fiber through a cross linkable compound which has a reactive double bond and a glycidyl group in its molecule. Nambu at [0010].

However, Nambu is silent about and fails to suggest

the limitation of independent Claims 60, 62, 78 and 79 of "an ethylenical hydroxyl group introduced onto the fibrous substrate for adsorbing at least one of a colloidal metal and a metal compound contained in the acidic semiconductor polishing slurry, the ethylenical hydroxyl group having a hydroxyl value of 40 mg KOH/g or more";

the limitation of independent Claims 60 and 78 of "an acid-type (H type) ... functional group introduced onto the fibrous substrate for ion-exchanging a metal ion contained in the acidic semiconductor polishing slurry"; and

the limitation of independent Claims 62 and 79 of "an alkali-metal-type ... functional group introduced onto the fibrous substrate for ion-exchanging a metal ion contained in the basic semiconductor polishing slurry".

The "ethylenical hydroxyl group"

First, Nambu does not suggest "an ethylenical hydroxyl group ... for adsorbing at least one of a colloidal metal and a metal compound ..., having a hydroxyl value of 40 mg KOH/g or more". This element gives a benefit of "physically adsorbing a hydroxyl group coordinated or bonded to the metals as the relevant metal colloid or metal hydroxide" (specification at [0016]), i.e., the "ethylenical hydroxyl group" enables adsorption of "at least one of a colloidal metal and a metal compound".

Nambu discloses that "[t]his procedure can allow the crosslinkable compound to efficiently graft-react with a hydroxyl group or an amino group in the fiber molecule to thereby efficiently introduce a glycidyl group that can easily react with the metal chelate-forming compound into the fiber molecule". Nambu at paragraph [0045]. However, Nambu does not suggest the function of "adsorbing at least one of a colloidal metal and a metal

compound", but instead discloses the function of the wettability of the fiber for introducing the glycidyl group.

According to present specification at [0016], if the metals are present as a colloid or hydroxide, "a hydroxyl group present in the polymer substrate is capable of physically adsorbing a hydroxyl group coordinated or bonded to the metals as the relevant metal colloid or metal hydroxide". The specification also discloses at [0021] that "[w]hen the hydroxyl value is less than 40 mgKOH/g ..., their physical adsorption performance becomes poor". Therefore, the "hydroxyl group ... having a hydroxyl value of 40 mg KOH/g or more" adsorbs "at least one of a colloidal metal and a metal compound".

Moreover, the "ethylenical hydroxyl group" has generally higher capability of adsorbing the metal colloid or the metal hydroxide than normal hydroxyl group because of its chemical structure. Therefore, the "ethylenical hydroxyl group" of independent Claims 60, 62, 78 and 79 functions as adsorber of the colloid and the hydroxide.

Even though Nambu disclose a hydroxyl group, Nambu discloses that the hydroxyl group is a normal hydroxyl group providing wettability. Nambu does not suggest an "ethylenical hydroxyl group" having capability of adsorbing the metal colloid or the metal hydroxide, and its concept at all.

The combination of the elements

Next, Nambu does not suggest a combination of the limitations of the "ethylenical hydroxide group ... for adsorbing at least one of a colloidal metal and a metal compound contained ... having a hydroxyl value of 40 mg KOH/g or more"; the "functional group ... for ion-cxchanging a metal ion contained"; and the "functional group ... for forming a metal chelate with the metal ion", each introduced onto the 'fibrous substrate". As discussed in the specification at [0016], this combination featured in the independent claims enables

"[adsorption] by exchanging the ions or forming a chelate with the relevant metal ions" as well as "physically adsorbing a hydroxyl group coordinated or bonded to the metals as the relevant metal colloid or metal hydroxide".

As a result, the amended claimed invention can give the benefit of totally removing the metal component, including metal colloid, metal particles, metal ion, metal oxide and so on, by use of chelate forming, ion exchanging and physical adsorbing.

Nambu does not disclose such a concept and the combination features at all, but only teaches usage of metal chelate forming. Nambu is negative about usage of ion-exchanging (Nambu at [0003]: "[h]owever, the ion exchange resins cannot always have sufficient effects of selectively adsorbing low concentration metal ions"). Therefore, Nambu does not give any motivation the combination of the "ethylenical hydroxyl group ... for adsorbing at least one of a colloidal metal and a metal compound contained", the "functional group ... for ion-exchanging a metal ion contained" and the "functional group ... for forming a metal chelate with the metal ion" in the claims.

Maintaining of acidity/basicity

Further, Nambu does not teach or suggest that "an acid-type (H-type) ... functional group" is used for "material for purification of an acidic semiconductor polishing slurry" (independent Claims 60 and 78), and "an alkali-metal-type ... functional group" is used for "material for purification of a basic semiconductor polishing slurry" (independent Claims 62 and 79). These elements enable the maintenance of acidity/basicity of purified semiconductor polishing slurry.

Nambu does not suggest the concept of maintaining acidity/basicity of the object to be purified. Nambu simply discloses the concept of purification of industrial waste water, drinking water and oil. Nambu at [0001]. Namely, Nambu does not suggest the concept

featured in independent Claims 60, 62, 78 and 79 of "material for purification of ... semiconductor polishing slurry used in a semiconductor polishing process".

This difference in concepts relates to a difference in purification. The target of claimed invention is extremely high purity (ppb) and higher accuracy of ion balance (acidity/basicity) than that of Nambu. Nambu does not suggest the concept of purity and accuracy of ion balance used in the semiconductor polishing process and the elements to be required thereto.

Because Nambu fails to suggest all the limitations of independent Claims 60, 62, 78 and 79, the rejection under 35 U.S.C. §103(a) over Nambu should be withdrawn.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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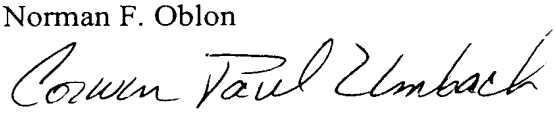

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